

USSN 10/828,490
Attorney Docket No. 2003B061/2
Reply to Office Action of September 1, 2006
Response dated November 14, 2006

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REMARKS/ARGUMENTS

AMENDMENTS TO THE CLAIMS

Applicants have withdrawn claims 16-93 for the reasons stated below related to the Examiner's restriction requirement.

Applicants have amended independent claim 1 to include a limitation requiring that the antistatic agent is pre-contacted with a scavenger before introduction into the reactor. Support for this amendment may be found, *inter alia*, in paragraph [0095] of the application as originally filed.

Applicants have added claim 94, which depends from claim 1.

No new matter has been introduced.

RESTRICTION REQUIREMENT

Applicants acknowledge the Examiner's statement of finality of the restriction requirement.

As indicated by the Examiner in prior communications, Applicants reserve the right to rejoin claims 32-45, 47-60 and 62-93 for consideration if generic claim 1 is found to be allowable.

As provided in MPEP §821.04, Applicants respectfully reserve the right to rejoin non-elected claims in Group II (claims 16-31, 46 and 61).

Applicants will cancel claims 16-31, 46 and 61 upon indication of allowable subject matter.

CLAIM REJECTIONS - 35 USC § 112

Claims 1-15 were rejected under 35 USC § 112, first paragraph, as claiming subject matter that was not described in the specification in such a way to reasonably convey to one skilled in the relevant art that the inventors had possession of their claim invention. The Examiner asserts this rejection based on a lack of support for the endpoint of "1.5 ppm" in Applicants' limitation for the concentration of the antistatic agent in Applicants' polymerization process. This rejection is traversed, and reconsideration is requested.

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Applicants note that a mistake was made in the prior response as the supporting paragraphs for Applicants' amendment to an endpoint of 1.5 ppm for the antistatic agent concentration. Rather than paragraph [0043], Applicants should have cited paragraph [0041] and Table 1 in support of the amendment. As discussed in more detail below, Applicants assert that the endpoint of 1.5 ppm is adequately supported by the application as filed.

There is no requirement that Applicants' specification disclose the endpoint of 1.5 ppm exactly. *In re Wertheim*, 541 F.2d 257, 265 (CCPA 1976) ("the invention claimed does not have to be described in *ipsis verbis* in order to satisfy the description requirement of § 112"); *In re Herschler*, 591 F.2d 693, 701 (CCPA 1979) ("The claimed subject matter need not be described in *haec verba* to satisfy the description requirement."). Applicants' application describes at least the following ranges of concentration of antistatic agent with respect to olefin in the reactor: a broadest of about 0.05 to about 200 ppm and including from about 0.1 to about 2.0 and from about 0.3 to about 0.8. *See Application*, ¶ [0041]. These ranges subsume the range claimed by Applicants in the currently presented claims, including the endpoint of 1.5 ppm and, together with the experimental examples, provide sufficient teaching to one of skill in the art to recognize Applicants invented processes included the limitation. *In re Herschler*, 591 F.2d at 701. "The burden of showing that the claimed invention is not described in the specification rests on the PTO in the first instance, and it is up to the PTO to give reasons why a description not in *ipsis verbis* is insufficient." *Id.* The current argument of lack of literal support is not sufficient to sustain a rejection under § 112. *Id.*

For the reasons stated above, claims 1-15 are sufficiently described in the specification as required under 35 U.S.C. § 112, first paragraph. Applicants, therefore, respectfully request removal of the rejection.

CLAIM REJECTIONS – 35 U.S.C § 103

Claims 1-15 been rejected under 35 U.S.C § 103(a) as obvious over U.S. Patent No. 6,833,338 to McDaniel, *et al.* ("McDaniel") in view of U.S. Patent No. 6,652,924 to Benazouzz ("Benazouzz"). This rejection is traversed and reconsideration requested.

The Office Action admits that McDaniel does not disclose Applicants' claimed range of antistatic agent concentration of 0.3 to 1.5 ppm by weight. The Action goes on to allege that one of skill in the art would be motivated to combine Benazouzz's teaching of Stadis 425 concentration of 0.3 to 70 ppm by

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weight with the polymerization process disclosed in McDaniel to achieve Applicants' invention. Further, in attempting to address Applicants' former claim 2 limitation regarding "pre-contacting" the antistatic agent and a scavenger, the Action alleges that "[b]ecause both triethylaluminum and antistatic agent are coexisting in the loop reactor, they are unavoidably contacted before polymerization occurs."

Applicants have herein amended the claims to incorporate a "pre-contacting" of static agent and scavenger limitation into claim 1. The pre-contacting described in Applicants invention is conducted prior to contacting monomers and/or the catalyst system inside or outside of the reactor, as described, *inter alia*, in paragraphs [0039] and [0095]. Applicants have unexpectedly found that by "contacting" (as defined in paragraph [0039] and hereinafter referred to as "pre-contacting") the antistatic agent with a scavenger, that the normal deleterious effects of antistatic agents on propylene polymerization catalysts can be minimized. See Declaration of Randell Wayne Dickey under 37 C.F.R. § 1.132, attached hereto, and incorporated as if fully disclosed herein. Mr. Dickey also explains in his declaration that it is not true that the triethylaluminum and antistatic agent of McDaniel would "unavoidably contact before polymerization occurs" simply because they are present in the same reactor loop. Instead, Mr. Dickey explains that a lack of exclusive proximity between antistatic agent and triethylaluminum (a result of the presence of metallocene catalyst and monomer) in McDaniel's process, would likely result in contact between the antistatic agent and catalyst (thus leading to a poisoning of the catalyst) before the triethylaluminum cocatalyst would be able to have a scavenging effect on the antistatic agent. It is further likely that the cocatalyst's ability to enhance the metallocene's catalytic ability would be inhibited by any contact with the Stadis 450, however unlikely that contact might be. This would render a combination of Benazouzz and McDaniel unfit for the purpose asserted in the Office Action, thereby rendering such a combination an improper basis for a § 103 rejection. MPEP § 2143.01 ("If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.") citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

It should also be noted that Applicants specifically define the scavenger that is contacted with the antistatic agent as not including "the catalyst components, for example, the metallocene catalyst component, the activator, the optional carrier or the components remaining in or on the catalyst used in its preparation" See Application, ¶ [0038]. This too, further differentiates Applicants' invention from any combination of Benazouzz with McDaniel, in which, by the Examiner's assertion, any contacting of antistatic agent would necessarily involve a "catalyst component" as described in the Application.

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Further, the deleterious effects of antistatic agents on propylene polymerization catalyst efficiency is not disclosed anywhere in McDaniel or Benazouzz, evidencing a failure on their part to comprehend the particular problem faced by someone attempting to use antistatic agents (such as Stadis 425) with propylene polymerization catalysts. Such non-recognition of the problem sought to be solved by Applicants' is evidence of the nonobviousness of Applicants' invention. *In re Peehs*, 612 F.2d 1287, 1290 (C.C.P.A. 1980) (holding that where there is no evidence of recognition of a problem, it is not proper to say that a solution to the problem would have been obvious) *citing In re Nomiya*, 509 F.2d 566, 572 (C.C.P.A. 1975).

Further, it is improper to suggest that one of skill in the art would be motivated to combine the teachings of Benazouzz with McDaniel to arrive at Applicants' invention because Benazouzz teaches away from Applicants' claimed limitation of "an antistatic agent that is pre-contacted with a scavenger" before introduction into the reactor. *See Benazouzz*, 3:9-12 ("... according to the present invention ... the process aid additive is **not added in admixture** with a catalyst component like the catalyst itself or the cocatalyst.") *emphasis added*. Benazouzz specifically teaches away from pre-contacting the antistatic agent (described as a "process aid additive") with triethylaluminum (used in Benazouzz as a cocatalyst). *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) ("A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.").

In light of the above, in the absence of a reference or concrete evidence explicitly supporting such assertions predicated upon sound technical and scientific reasoning, Applicant respectfully submits that the claimed invention is not obvious and request that the rejection be withdrawn.

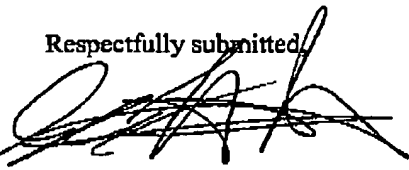
CONCLUSION

Having demonstrated that the cited reference fails to disclose the invention as claimed, all remaining objections and rejections having been overcome, this application is in condition for allowance. Accordingly, Applicants request early and favorable reconsideration in the form of a Notice of Allowance.

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If necessary to affect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to affect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1712 (Docket #: 2004B061/2).

Respectfully submitted,



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Date

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